Md Mainul Hasan Sarker, PhD
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EDUCATION

Monash University **2018-2023**
Ph.D. in Science (Genomics & Bioinformatics)
Award: Graduate research merit scholarship
Research: Unlocking the genetic secrets of heat tolerance in Malaysian weedy rice.

AIMST University Malaysia **2016-2018**
MSc in Biotechnology (Research in Genomics & Bioinformatics)
Research: Identification and characterization of novel ncRNA in Enterobacter cloacae.

University of Development Alternative (UODA) **2010-2014**
BSc in Molecular Medicine and Bioinformatics.
Research: A Preliminary Phytochemical and Pharmacological Study on Antinociceptive Effect of Curcuma longa L. (Rhizome) Methanol Extract in Swiss Albino Mice

JOB EXPERIENCE

- **Postdoctoral Research Scholar** **Dec 2023 to Cont..…**
  Position: Research Scholar (Genomic and Bioinformatics)
  Institution: University of South Florida
- **Graduate Research Assistants** **Dec 2018 to Sep 2022**
  Position: Bioinformatics data scientist
  Institution: Monash University
- **Research Data Collection Supervisor,** **April 2016 to Sep 2016**
  Research Topics: Formal-informal labour nexus and growth
  Position: Field Supervisor
  Institution: BRAC Institute Of Governance Development (BIGD)
- **Research Associate,** **Aug 2015 to Dec 2015**
  Research Topics: Essential services package (ESP) costing study
  Position: Field Supervisor
  Institution: Center for Social & Market Research (CSMR)

TEACHING EXPERIENCE

University of South Florida
- Co-supervisor and Mentoring undergraduate project
- Mentoring undergraduate, graduate, and research scientists

Monash University
- Teaching assistant at Monash University. SCI1020 (Introduction to Statistical Reasoning) and STA2216 (Data Analysis for Science)
- Mentoring and leading projects of undergraduate and graduate students.

AMIST University (Lead Instructor)
- Workshop on R for Bioinformatics
- Workshop on Bacterial Transcriptome Analysis and Identification of ncRNAs

PRESENTATION AND AWARD

- PGC-PTSD EWAS Consortium oral presenter, November call 2025
- PGC-PTSD EWAS Consortium oral presenter, March Call 2025
- PGC-PTSD EWAS Consortium oral presenter, April Call 2024
- USF Health Research Day 2025- Oral Presenter
- USF International Visiting Scholar Research Showcase, 2025
- 2025 SOBP Annual Meeting. Poster presentation.
- Winner of track three, MIT Hacking Medicine 2024.
- Winner of the top team, Veteran Health Make-a-thon 2024.
- USF International Visiting Scholar Research Showcase, 2024
- Faculty of Science 2022 Graduate Research Conference held at Monash University on June 7th -10th, 2022
- Monash University graduate research merit scholarship.

REFERENCE

Juan David Ramírez-González, PhD
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USF Genomics Program,
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Monica Uddin, PhD
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Derek Wildman, PhD
Professor
Psychiatric Genomics
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dwildman@usf.edu

PUBLICATION

- **Sarker, M. H** et al., DNA Methylation as a Mediator of Cardiovascular Disease Risk in Relation to PTSD Severity: Identification of Potential Epigenetic Biomarkers (**Submitted**)
- **Sarker, M. H** et al., PTSD-specific epigenetic biomarkers in the glucocorticoid pathway: distinct DNA methylation at POMC and osteocalcin loci (BGLAP) (**Manuscript preparation**).
- Dahrendorff, J., Pages, K., Currier, G. et al. Epigenetic profiles of response to transcranial magnetic stimulation in treatment resistant depression. BMC Med Genomics 18, 181 (2025). https://doi.org/10.1186/s12920-025-02240-2
- **Sarker, M.H**., Hussain, M.H., Neik, T.X. *et al.* Hot off the genes: uncovering differentially expressed genes in Malaysian weedy rice in response to heat stress. *Euphytica* **221**, 115 (2025). https://doi.org/10.1007/s10681-025-03569-6
- **Hasan Sarker, M.M.,** Ratanatharathorn, A., Ratanatharathorn, A., Wani, A.H., Aiello, A.E., Qu, A., Koenen, K., Wildman, D.E., Uddin, M., 2025. 457. DNA Methylation as a Mediator of Cardiovascular Disease Risk in Relation to PTSD Severity: Identification of Potential Epigenetic Biomarkers. Biol. Psychiatry 97, S285.
- **Sarker, M.H**., Hussain, M.H., Neik, T.X. et al. Screening of heat stress-tolerant weedy rice and SNP identification of heat-tolerance-related genes. Plant Biotechnol Rep (2024). https://doi.org/10.1007/s11816-024-00920-6
- Roy, P., Naher, L., **Sarker, M.M.H**., Azad, M.S.A., Haque, M., Rahman, S. and Rahmatullah, M., 2014. Oral glucose tolerance and antinociceptive activity evaluation Coroupita guianensis fruits. Advances in Natural and Applied Sciences, 8(9), pp.18-23.

- Sultana, J., **Sarker, M.M.H**., Rahman, A., Monalisa, M.N., Marzan, M., Faisal, M. and Rahmatullah, M., 2014. Analgesic activity evaluation of methanol extract of Luffa cylindrica fruits. Advances in Natural and Applied Sciences, 8(9), pp.13-7.
- Faisal, M.D., **Sarker, M.H**., Rahman, A., Hossain, A.I., Rahman, S., Bashar, A.B.M.A., Jahan, R. and Rahmatullah, M., 2014. Murraya paniculata (L.) Jack: a potential plant for treatment of toothache. Journal of Dentistry, Oral Disorders and Therapy, 2(3), pp.1-3.